

18304 U.S. PTO
07/28/03

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A. TITLE
AMUSEMENT AREA DEVOTED AND STRUCTURED FOR
SKILLED MANEUVERING OF A VEHICLE

022
7/25/03

2nd page is ABSTRACT

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C. KNOWN PRIOR ART

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None.

1 D. DISCUSSION OF PRIOR ART AND BACKGROUND OF INVENTION

2 The invention herein is centered on a park area that is structured to comprise a
3 plurality of obstacle areas or zones that are to be traversed in a vehicular movement in a
4 controlled manner over a series of courses. The driver of the vehicle in this park area is
5 required to combine driving skills involving turns, climbs, hazards, and other obstacles,
6 and in the process movement utilizes certain driving skills, however, with the difference
7 that negative points are accumulated for contacting stationary members in a given obstacle
8 zone. Other scoring techniques may be used in this respect.

9 There are no known park areas having such obstacle zones for vehicles that adopt
10 a function with the purpose that would be to produce areas of roadways with the
11 foregoing features and the following objects of the subject invention are directed
12 accordingly.

13 It is a further purpose of this invention to provide an amusement area where
14 drivers or operators of any type of vehicles can maneuver their vehicles for recreational
15 purposes in a manner that is not specifically permitted over public highways. The
16 purposes in this regard is to permit a driver to test the limits of his driving skill, as well as
17 the limits of a vehicle. This invention sets forth a novel approach to such activities and
18 the objects herein as set forth below.

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E. OBJECTS OF THE INVENTION

It is an object of the subject invention to provide a novel park area for drivers to maneuver motor vehicles through one or more obstacle zones for scoring or non-scoring purposes;

Another object of the subject invention is to provide an improved amusement area that requires motor vehicle driving skills on the part of the driver and includes scoring means for the relative skill maneuvering in an obstacle area;

Still another obstacle is to provide an amusement area devoted mainly to motor vehicle operation for skill purposes;

It is also an object of the subject invention to provide an area, with a plurality of driving obstacles, where the driver can test his or her driving skills on various obstacles;

Yet another object of the subject invention is to provide an area devoted to motor vehicle obstacles for testing driving skills;

Other and further objects of the subject invention will be apparent from a reading taken in conjunction with the claims.

Further objects of the subject invention are to provide zones for operation of motor vehicles for training individuals in motor vehicle operations through varying obstacle zones.

F. BRIEF DESCRIPTION OF DRAWINGS

Figure 1 is a top elevational view of the preferred embodiment of a park area incorporating features of the subject invention;

Figure 2 is a top elevational view of one embodiment of an obstacle zone used in conjunction with the subject park;

Figure 3 is a top elevational view of yet another embodiment of an obstacle zone to be used in the park area incorporating features described in this application;

Figure 4 is a top elevational view of still another obstacle zone used in conjunction with the subject invention;

Figure 5 is a top elevational view of a bumper obstacle used in conjunction with the subject invention, showing moving contact by a vehicle;

Figure 6 is a side elevational view in section of a contact member and the vertical moveable post used to sense and register an impact against a bumper obstacles as shown in figure 5.

Figure 7 is a top elevational view of an additional embodiment of an obstacle zone.

1 G. DESCRIPTION OF GENERAL EMBODIMENT

2 AND SUMMARY OF INVENTION

3 The subject invention comprises an area that is structured to hold one or more
4 obstacles zones for the maneuvering of motor vehicles through an obstacle or series of
5 obstacles, all requiring skill in the operation of a particular vehicle, with the obstacle zones
6 having a plurality of contact members that are intended to be avoided by the vehicle
7 operator while driving through a particular obstacle zone, which contact members are
8 adapted to sense a vehicle impact and are capable of registering such contact or contacts
9 in order that a score can be attributed to a given rider's relative skill in the drive through
10 such obstacle course, such scoring being a functional representation of the relative skill of
11 a driver as to a specific obstacle zone.

12 In further summary, the subject invention is focused on a theme park centered on
13 operation of motor vehicles under conditions where the driver's skill is tested over various
14 driving courses and where the driver's skill is tested and scored through electronically
15 activated means which are then optionally computer correlated and tabulated. The scoring
16 results calculated through computer means, are then set forth for comparison purposes to
17 ascertain relative scoring between drivers or contestant drivers.

18 For purposes of accomplishing these objectives, each individual obstacle portion of
19 the overall course is equipped with devices that are sensitive to physical contact by a
20 motor vehicle as it is driven and navigated through the course.

1 In some instances, a particular course that is to be navigated by the driver may
2 have strategically placed sensitive devices that will sense any touching or impact by a
3 motor vehicle as it traverses through the obstacle.

4 These sensitive devices may be physical members that upon impact are moved in a
5 predetermined direction, such as sideways, inwardly, or in any direction, so long as the
6 resultant movement will cause an electromechanical action that, in turn, is converted to a
7 specific electrical tabulator ultimately linked to a computer. Obviously, any impact device
8 will be appropriately structured, with cushioning or other means that will not result in a
9 vehicular damage when the impact occurs. Conversely, the sensing devices will be
10 structured in a flexible manner so that impact will not damage the vehicle. Other physical
11 or electrical means may be used to record and score impacts by a vehicle.

12 Other obstacles may be structured in a manner where there is manual scoring,
13 photographic sensing device, or other means to ascertain the impact of the vehicle in a
14 given obstacle. Whatever scoring means is used, there will be some ultimate correlation or
15 comparison with other scorings.

16 It is contemplated that the driver who enters the course will maneuver a vehicle
17 through a number of obstacles for individual scoring in each case. In such event an overall
18 scoring result may be utilized for this purpose.

19 In a general summarization of the subject invention, it is indicated that the subject
20 invention is focused on an amusement scheme utilizing land-based vehicles of any type,
21 including automobiles, trucks, racers, scooters, bicycles, motor bikes, or other land-based
22 vehicles on a land-based course, including a series of obstacles or other objects which are

- 1 to be maneuvered over, around, or against for sporting purposes involving driving skills in
- 2 which the vehicle operator is given points for scoring purposes.

1 H. DESCRIPTION OF PREFERRED EMBODIMENT OF THE INVENTION

2 In describing a preferred embodiment of the subject invention, it is to be stressed
3 that the following description of a preferred embodiment is not to be considered as
4 limiting the scope of the subject invention, as set forth in the claims.

5 Referring now to the drawings in which a preferred embodiment of the subject
6 invention is shown. An upper evaluation view of park area 10 is shown in figure 1, which
7 park or other area includes the various and sundry obstacles that are to be maneuvered
8 through or over in a vehicle by a participant. In this respect, the park area 10 may include
9 any given number of separate obstacle zones 20A, 20B, 20C, 20D, 20E, 20F.... which are
10 to be negotiated preferably while driving a motor vehicle. Thus describing and showing a
11 specified number of obstacles, this will not be considered as limiting the subject invention.
12 It is important to indicate in this aspect that the various obstacle zones will generally differ
13 from one another as to the type of specific skill or type of obstacle involved, however, this
14 will not preclude some of the obstacle zones from being similar to one another as to the
15 type of specific obstacle or the skill needed to negotiate a particular obstacle zone.

16 It is intended in this respect that the separate obstacles be spaced apart from one
17 another any give distance so that the individual maneuvering through a particular obstacle
18 zone 20A, 20B, 20C, 20D, 20E, 20F... will be able to focus again before entering each
19 new obstacle zone. However, in this latter respect, the respective obstacle zones need not
20 be spaced apart for purposes of implementing this invention, as some may be spaced apart
21 while others may be juxtaposed or positioned next to each other without any spatial
22 separation. Further, it is noted that the obstacles 20A, 20B, 20C, and 20D may be located

1 on a surface other than the ground, such as on a platform that could be located in an
2 amusement park or otherwise. Additionally, it is to be noted that the obstacle zones may
3 be structured so as to be maneuvered through by any type of land-based vehicle, or in
4 some applications of the subject invention, by boats over a water-based course.

5 As further seen in figure 1, the respective obstacle zones 20A, 20B, 20C, 20D,
6 20E, 20F are preferably located and positioned, particularly for purposes of facilitating
7 leaving one obstacle zone and entry into the next obstacle zone. By this latter positioning,
8 the individual driving a motor vehicle or other vehicle through the park course will, upon
9 leaving one obstacle zone, be able to line up his or her vehicle for entering the next
10 succeeding obstacle zone. It is not intended in this latter respect that the participant need
11 go through each obstacle zone, as any arbitrary array of obstacle zones may be entered for
12 this purpose. In one embodiment, however, it is contemplated for competitive scoring
13 purposes that the individual or group participants maneuver through a complete set series
14 of obstacle zones 20A, 20B, 20C, 20D, 20E, 20F... so that the competitive scoring will
15 have a standard for comparative purposes.

16 It is stressed in this latter respect that any number or combination of the obstacle
17 zones 20A, 20B, 20C, 20D, 20E, 20F... may be to have different courses that can be
18 maneuvered by participants. Scoring standards will be had for each such different course
19 to be maneuvered, and thus designations and maps can be provided for each different
20 course to be maneuvered. For example, one course could be from obstacle zone A to
21 obstacle zone C to obstacle zone D. Yet another aspect of negotiating the obstacle zones
22 is that the obstacle zones may, for some participants, be negotiated in a random or

1 arbitrary manner, generally for non-scoring purposes. However, this randomness may be
2 projected into a scoring mode by having scoring bases and comparisons for any arbitrary
3 array of obstacle zones 20A, 20B, 20C, 20D, 20E, 20F... Relative to the latter discussion,
4 an example of a course to be maneuvered is seen in figure 1A.

5 Attention is now directed to figure 1 of the drawings in which is shown one
6 example of a specific obstacle zone to be maneuvered. Before describing this course, it is
7 significant to understand that obstacle zone 30 shown in figure 1 is only set forth as an
8 example of such an obstacle zones of the entire contemplated array of obstacle of an
9 obstacle zones involved.

10 For example, the obstacle zone 30 shown in figure 2 can be configured and
11 constructed as seen from the upper planar elevational view shown in figure 2. As seen,
12 obstacle zone 30 comprises a restricted course for driving a motor vehicle or other vehicle
13 there through in such a manner so that the operator will endeavor to skillfully negotiate
14 the roadway through the obstacle zone without contacting any obstacles. More
15 specifically, the specific obstacle zone 30 can be optionally provided with lateral entrance
16 barriers 35A and 35B. These lateral barriers function to define the outer limits of this
17 particular obstacle zone. These lateral entrance barriers 35A, and 35B, can be fences,
18 posts, walls, or simply no barrier as long as the entrance or more specifically the
19 entranceway 35 obstacle zone is somehow defined by lateral limits. In some instances, the
20 roadway 40 that extends through the obstacle zone 20B or any obstacle zone, may itself
21 define the lateral limits of the obstacle zone. The obstacle zone 30 has a roadway 40
22 therefrom such roadway extending from an entrance 50A of the obstacle zone to the exit

1 50B. This roadway 40 may be straight or it may be curved in part for testing the skill of
2 the driver. The areas of the obstacle zone 30 that are not covered by a roadway are off
3 limit areas 35A and 35B along with lateral sides which the driver must avoid to
4 successfully negotiate the obstacle zones.

5 As thus can be surmised, the roadway, in any obstacle zone, will be ideally
6 configured in a manner to require the driver to maneuver his or her vehicle through
7 relatively sharp turns for testing the driver's skill. Other characteristics of roadway in a
8 given obstacle zone may include in addition turns, hills, water courses, variant hardness of
9 road conditions or other variations to cause the roadway to have some difficulties for
10 maneuvering purposes. Not all these variations are demonstrated in the drawings or
11 specifically described herein, as any variations and combinations thereof can be used on a
12 given road in an obstacle zone.

13 To ascertain the degree of skill in maneuvering through obstacle course 30, as
14 shown, contact members 60A, 60B, 60C, 60D, 60E, 60F, 60G, 60H are positioned
15 strategically along the lateral edges 45A and 45B of the roadway 40. The exact number
16 and positioning of the contact members may vary from that shown in figure 2 and for this
17 purpose is in arbitrary arrangement. Therefore, numbered positioning of these contact
18 members is not critical.

19 The contact members 60A, 60B, 60C, 60D, 60E, 60F, 60G, 60H are positioned as
20 stated long the edge of the roadway 40, and are members that are intended to receive and
21 register mechanically, and thence electrically or electronically any impact of a given motor
22 vehicle, such as motor vehicle 75 shown in outline form in figure 1. Alternately stated, the

1 driver of motor vehicle 75 will drive and maneuver the motor vehicle in such a manner to
2 traverse roadway 40 in obstacle zone 30 in such a manner so as to avoid contacting any of
3 the numerous contact members while traversing the road. Specifically, when a contact
4 member 60A, 60B...60H is touched by a motor vehicle as it transverses on the road 40,
5 the contacting encounter will be sensed by the particular contact members. Each
6 contacting encounter of a motor vehicle with any one of the contact members will be
7 registered as a negative point or negative points assigned, depending on the location of the
8 specific contact member 60A...60H. For instance, a contact member that is positioned
9 along a straight portion of the roadway may lead to greater negative points than one,
10 compared to disposed along a tight curve. This latter aspect may be arbitrary, however,
11 and there is no definitive or exacting point arrangement that limits or defines the scope of
12 the invention herein.

13 It is also important to note that the various contact members 60A, 60B...60H are
14 preferably comprised of a rubber-like substance on their outer surface, so that they will not
15 damage the motor vehicle. However, other soft or relatively soft compositions may be
16 used.

17 Thus, as can be seen in an overall fashion, the obstacle zone 30 to be maneuvered
18 will require that the driver travel the roadway 40 so as to avoid contacting as few as
19 possible of the contact members 60A, 60B...60H as possible. By so doing, the negative
20 points will be lessened and the fewer negative points, the better the score for the driver. A
21 conversion system of any type can be used to convert negative points on the contact
22 members to a positive score. As an example, a score of one thousand may be given for not

1 contacting any contact members 60A, 60B...60H over the entire array of obstacle zones
2 used in a given overall movement and greater the number of contact by the driver
3 subtracted from the 1000 standard score. This 1000 standard score would be the inverse
4 number of all the negative contact points that could be potentially received on a given
5 course. Thus, if for instance a course has numerous obstacle zones having an overall sum
6 of one thousand potential contact points. A driver who contacts six hundred contact
7 members for six hundred negative points would receive a score of positive four hundred.
8 This latter scoring aspect would be optional, as any other system of scoring covered be
9 used in this respect.

10 At this point, it is important to emphasize and discuss a salient and obvious aspect
11 of the process of maneuvering a vehicle through a given obstacle zone. For example, in the
12 obstacle zone 30 shown in figure 1, when a driver enters the obstacle zone at entrance
13 point 50A and drives to exit point 50B, he or she will generally be able to successfully
14 make the passage without much or any touching of the contact members, if the driver
15 proceeds a relatively slower through the course. This aspect is most obvious. As a result,
16 placed at each or one side of the entranceway 50A are timers or speed sensors 70A and/or
17 70B. Correspondingly placed at opposing sides of the exit point are time sensors or speed
18 sensors 65A and /or 65B. By positioning such sensors, as stated, the time it takes to
19 traverse from the entrance point 50A to the exit point 50B will be recorded and the speed
20 calculated accordingly dependent on the length of the roadway 40 through the obstacle
21 course 30. Such times sensor or sensors could be correspondingly placed on each
22 obstacle zone.

1 But this feature, the speed of the vehicle is recorded and it can be factored into the
 2 scoring aspect in a potential inverse mathematical relationship, among others, depending
 3 on such speed as follows:

$$4 \frac{\text{Speed}}{\text{Number of negative contact points contacted}} = \frac{\text{Relative}}{\text{Score}}$$

6 In other words, the greater the speed, the greater will be the score for a given
 7 number of contact members contacted. Consequently, if a driver moves through the
 8 distance zone at a speed of ten miles per hour and hits a contact member carrying a
 9 negative twenty (20) points, the driver will receive a negative two (2) contact points as
 10 seen in the following:

$$11 \quad 10/20(\text{speed}) = 1/2 \text{ points}$$

12 On the other hand, if another driver hits the same contact member at speed of 40 miles per
 13 hour, his or her score points will be calculated proportionately as follows:

$$14 \quad 40/20 = 2.0 \text{ points}$$

15 In order to calculate speed through a given obstacle zone, as stated above there is
 16 provided at the entrance to each obstacle zone 20A, 20B, 20C, 20D, 20E, 20F ... a
 17 sensing device which triggers a timing device to initiate a timing sequence for a given
 18 driver to drive through such particular obstacle zone. At the exit end of the obstacle zone
 19 is a second timing device which activates to signal the end of the drive through such
 20 obstacle zone. The respective sensing devices discussed and above are interconnected to a
 21 computer not shown which receives the respective entrance and exit times from the
 22 sensing device and computes and registers the speed of the driver through the obstacle
 23 zone, given the driving distances through the obstacle zone. As discussed, the speed

1 through the obstacle zone by a given driver will yield an input factor relative to scoring a
2 driver.

3 For purposes of activating the timing device, it is optimal that the entry timing
4 mechanism be comprised to two opposing members aligned to each other along an
5 imaginary line A-A defining the entrance to the particular obstacle zone. A lower powered
6 laser beam or photoelectric beam can be interrupted by a portable transmitter which is
7 activated through the photoelectric beam. This triggers the timing device accordingly. The
8 same process is initiated on the exit..

9 The timing sequence can be either stored in the receiver/computer on the vehicle
10 and store therein or relayed through the respective timers to a central computer. Other
11 processing means can be used other than that described above.

12 Attention is addressed to figures 5 and 6 of the drawings.

1 Shown in detail is an example of a contact member 60 that is used in conjunction with the
2 subject invention. The following described structure is only one of the several
3 embodiments used for a contact device that can be used in conjunction with the concepts
4 herein.

5 Specifically as seen in the drawings contact member 60 is used as an example of
6 how all the contact members can be structured. As seen in the drawings the contact
7 member 60 is formed as having a rounded outer cylindrical surface 700 preferably been
8 formed of a comparatively soft, pliable material such as sponge, rubber, soft plastic, fabric
9 or any substance that will not cause damage to a vehicle upon impact. As can be seen in
10 figure 5 and 6, the center of the contact member is a rigid, vertically upright support
11 member 720 that forms the interior of the contact member 60 and which is the support
12 mechanism of the outer soft covering, as discussed above.

13 The vertical support post 720 has a lower longitudinally extending secondary
14 support bar 740 which is partially embedded, on its upper part inside the vertical 740
15 support member 740. As can be seen from the drawings the lower secondary support bar
16 is coaxially supported in a conformingly shaped coil spring member 760 that is placed just
17 immediately around the outer surface of the lower secondary support bar 740. The
18 bottom of the spring member 760 and the bottom of the secondary support member 740
19 and at their respective bottom portions are embedded together in a cone shaped electrical
20 contact member 800 which is flexibly anchored in the bottom of a cylinder chamber 820
21 comprised of an electrically conductive material that when contacted or touched by any
22 part of the contact member 800 will result in an electrical signal that is translated into a

1 score representation for scoring purposes. This electrical signal can optimally relay to a
2 computer for scoring purposes. The bottom most portion of the conical member 800 is
3 affixed to the bottom surface of the cylindrical chamber 820 through a flexible swivel pivot
4 member 826, which pivot member is flexibly structured and mounted to allow the conical
5 contact member to move back and forth laterally in any direction towards any of the inner
6 surface areas 830 of the cylindrical chamber 820.

7 As seen in figure 6, the contact member 800 is placed so that when the vertical
8 support post and the secondary auxiliary support base are aligned vertically upright
9 relative to the ground, there is no touching or contact between the contact member 800
10 and the cylindrical chamber 820, except through the bottom swivel pivot member 826. In
11 this upright position, the contract member 800 does not touch any portion of the upright,
12 vertical surface areas 830 of the cylindrcal chamber 820. Thus, in such upright position,
13 without such contact, there is no electrical signal transmitted for a negative score and it is
14 only when the contact member 800 is pushed in one direction or another that any such
15 contact occurs between the contact member and the vertical inner surface 830 of the
16 cyclindrical chamber. When such contact is made there is a score registered by such
17 contact, as indicated above.

18 As seen in figure 8 a field 900 is shown which can include and hold several
19 obstacle zones 20A, 20B, 20C.... as described. Shown thereon is an entranceway 910 to
20 drive into the field 900, and any number of addition obstacles. Once the courses intended
21 are completed, the driver can exit at any point such as point 930 and drive back along road
22 960 to a point near the entranceway. This latter layout is optional however.

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